LEFT VENTRICULAR FUNCTION AFTER TRANSMURAL MYOCARDIAL INFARCTION: A BLINDED, RANDOMIZED STUDY COMPARING STREPTOKINASE AND rt-PA.

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This was a blinded, randomized trial of thrombolytic therapy for 200 pts having first transmural myocardial infarction (MI) who were treated within 4 hrs (mean 156±80 min) of MI with aspirin and either IV streptokinase (STK 150 million u in 1 hr) or rt-PA (100 mg in 3 hrs). All were treated with heparin 1 hr before stopping study drug infusion with PTT regulated to 60-100 sec. Revascularization (37% bypass surgery, 24% PTCA) was done within 4 days. Mortality was 5.5% (11/200), 7% with STK and 4% with rt-PA (p=ns). Angiography within 24 hrs showed an open infarct artery in 88% with STK and 88% with rt-PA. All had radionuclide angiography 7-10 days after MI:

LEFT VENTRICULAR EJECTION FRACTION (%)

	All pts	Ant MI	Inf MI
STK	52±14	44±14	56±12
rt-PA	52±13	45±14	57±10

Using a treatment strategy of early thrombolytic therapy, aspirin, full dose heparin and early revascularization, there was no difference between the effects of STK and rt-PA on left ventricular ejection fraction after MI.

EVENT-FREE HOSPITALIZATION AFTER EARLY AND SUSTAINED PATENCY USING COMBINATION THROMBOLYTIC THERAPY IN ACUTE MYOCARDIAL INFARCTION

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To evaluate the importance of early and sustained patency on clinical outcome after thrombolytic therapy (TT) in myocardial infarction, we examined 1064 pts enrolled in 5 consecutive studies with similar entry criteria. Treatment strategies included high dose (HD) tPA (150 mg/6 hrs) in 386 pts, weight adjusted (WA) tPA (1.5 mg/kg/4 hrs) in 175 pts, standard (S) tPA (100 mg/3 hrs) in 96 pts, urokinase (UK) ($3x10^6$ units/1 hr) in 198 pts, and a combination (COMBO) of UK ($1.5x10^6$ units/1 hour) and tPA (1 mg/kg/1 hour) in 209 pts. All pts had patency (P) assessed during angiography at 90 mins and 5-10 days later. Acute PTCA was used in 35% and was successful in 83%. Clinical outcome was analyzed using a combined clinical endpoint (CCE) (heart failure or recurrent ischemia, reinfarction, stroke or death). Data are displayed with 95% confidence intervals (CI).

			Reocclusion				
					TT+	TT	
Therapy	P	95%CI	All	95%CI	PTCA	Alone	CCE
COMBO	76%	70-82%	7%	3-11%	8%	6%	28%
UK	66%	59-73%	8%	4-12%	13%	5%	34%
WA-tPA	81%	75-87%	11%	6-16%	13%	11%	34%
S-tPA	76%	67-85%	13%	5-20%	19%	11%	38%
HD-tPA	75%	71-80%	15%	11-19%	21%	9%	41%

Thus, by combining nonspecific and specific fibrinolytic agents, a high early patency rate which is not offset by early reocclusion can be achieved. This strategy may be associated with a better overall clinical outcome for patients with acute myocardial infarction.

PREDICTION OF REOCCLUSION AFTER SUCCESSFUL REPERFUSION DURING ACUTE MYOCARDIAL INFARCTION

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To identify clinical and angiographic factors predictive of reocclusion of the infarct-related artery (IRA) after successful reperfusion, we studied 962 pts from 5 consecutive studies. All pts had patency established during cardiac catheterization 90 minutes after thrombolytic therapy (TT) and reassessed 5-10 days later. TT was tPA in 595 pts, urokinase in 163 and a combination of the two in 204 pts. Acute PTCA was performed in 362 pts. Variables examined included age, sex, risk factors, heart rate, blood pressure, infarct location and TT used. Angiographic variables analyzed were IRA, TIMI grade flow, and if acute PTCA or intraaortic balloon pump were used. Overall reocclusion rate was 11%. Multivariable analysis using logistic regression identified the following predictors of reocclusion:

	Univariable		Multivariable	
Variable	χ^2	p	χ^2	p
TIMI Flow	26.5	<0.0001	31.2	<0.0001
tPA	7.7	0.006	12.6	0.0004
Heart Rate	12.1	0.0005	12.3	0.0005
IRA=RCA	11.2	0.0008	8.3	0.004

The predictive model (χ^2=60.8) was confirmed in an independent population. Thus, slow heart rate at presentation, tPA administration and the findings of right coronary IRA and reduced TIMI flow in IRA are important independent predictors of reocclusion after successful reperfusion therapy.

PREHOSPITAL DELAY AMONG WOMEN WITH ACUTE MYOCARDIAL INFARCTION

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Women with acute myocardial infarction (MI) may be at greater risk for excessive prehospital delay than men. To determine reasons for this difference, we gave detailed questionnaires to 32 women and 94 men admitted with confirmed acute MI. Median time from symptom onset to summoning hospital transport was 4.0 hours in women and 1.0 hours in men (p=.001). Median total prehospital time was 4.4 hours in women and 1.8 hours in men (p=.006). At the time of hospital arrival, women were less likely than men to be "optimal" lytic therapy candidates (34% vs 54%, p=.049), and were less likely to receive lytic therapy (22% vs 43%, p=.035). Compared to men, women were older (61.7 vs 56.6 years, p=.048), had lower incomes (p<.001), and were less likely to be married (50% vs 78%, p=.006). Women reported less awareness of the use of "clot dissolving therapy" for MI (p=.048), and identified fewer reasons why early MI treatment is important (p<.01) than men. MI symptoms, setting, location, complications, and peak creatine kinase were similar (p=NS) between men and women, as were reasons cited by patients for prehospital delay.

Conclusion: Demographic and patient education factors appear to contribute to the greater prehospital delay observed in women with acute MI. Future public education efforts should be specifically directed to this high-risk group.